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ABSTRACT

This paper presents some background information and a brief report on the progress of the first two and one-half months of the Synanon study of the social behavior of communally-reared children in which an attempt is being made to apply ethological methods of observation and analysis to human infant behavior. The children range in age from 6 to 40 months and are divided into two peer groups: infants (6 to 18 months) and the 2 to 4 program (19 to 48 months). The focus of the 230 hours of behavioral observations has been aggressive and submissive behavior in the peer groups. Dyadic aggressive-submissive interactions are recorded, and their outcomes are entered into a matrix which then provides the basic index of dominance relations between the children. In addition to making observations of the children, the project staff participate in meetings, seminars, and feedback sessions with the school staff which provide opportunities for formal and informal information exchange. (SDH)

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A STUDY OF THE SOCIAL BEHAVIOR OF COMMUNALLY-REARED CHILDREN RANGING IN AGE FROM BIRTH TO 30 MONTHS: A PROGRESS REPORT

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INTRODUCTION

This project, as described in the original grant application, proposes to examine the social behavior of peer groups of communally-reared children ranging in age from birth to 30 months, living in the Synanon School. The School is a children's community within the larger Synanon community and is a natural laboratory for the study of human development. Research on socialization during this age range is relatively scarce despite increasing evidence that this period is critical to development (White, 1971). During the age from birth to three years, the child is particularly open to environmental influences and long-term patterns of learning and social behavior are established.

This study represents an attempt to apply ethological methods of observation and analysis to human infant behavior. The review of literature on the ethological approach to the study of human behavior reveals a scarcity of research on social behavior of children under the age of three years. However, the description of several broad categories of behavior such as aggression and play into a finer analysis consisting of specific motor elements or components by McGrew (1972) and Blurton Jones (1972A and 1972B) is a hopeful indication of the usefulness of the ethological approach to the study of our species.

SIGNIFICANCE

This study will provide data on the social behavior and development of children during the years from birth to 30 months. Such a study represents study of a relatively new period of human development. Previous research on this age class has focused primarily on parent-child interactions rather than socialization with peers.

The findings from this study will provide information on effects of long-term peer associations on development of specific patterns of social behavior. Such findings may ultimately permit:

(A) The comparative analysis of social behavior patterns with infra-human primate species.

(B) The assembling of an ethogram for children ranging in age from birth to 2-1/2 years.

(C) The construction of model child-care centers which incorporate portions of the communal-rearing processes employed in the Synanon School.

The heterogeneity of the population, in terms of racial and parental backgrounds enhances the generalizability of the findings to other populations in this country. This population provides an excellent opportunity for longitudinal study in that it is a very stable population where little attrition occurs.

CS007216

METHOD OF PROCEDURE

SYNANON FOUNDATION, INC.: HISTORICAL PERSPECTIVE

Beginning with approximately twenty individuals, Synanon Foundation, Inc. has grown in fourteen years into a community today housing over 1400 men, women and children. (For a detailed description of the history, see Endore, 1968 and Yablonsky, 1965). Synanon currently has facilities in Santa Monica, Badger, Oakland, San Francisco, and Marshall, California and in Detroit, Michigan. Originally conceived as a rehabilitation center for character disordered individuals, Synanon has grown to be a natural experiment involved in the reconfiguration of environemntal space, community health practices and the communal-rearing of children.

THE SYNANON SCHOOL

The Synanon School began in July 1966 with 13 children. The School is a 24-hour-a-day children's community where children live in peer groups from birth on. The School is part of the larger community of Synanon residents. The history of the School has been one of continual change and experimentation. The teaching of language, mathematics, art and physical education is centered around motor perceptual development. The School has evolved to the present experiment of tutorial teaching (older children teaching younger ones) and peer group learning. A detailed description of the various aspects of philosophy and procedure of the School is currently in preparation (Burke and Missakian).

At this time (December 1972) there are approximately 240 children living in the School. Their ages range from birth to 18 years. The two peer groups proposed for study are: 0 - 6 months and 6 - 30 months. They are organized into the following two programs in the School:

Birth - 6 Months

The Synanon School began with school-aged children living together. By 1969, children entered the School between 6 - 12 months of age and in May 1972, the most recent expansion of the School occurred. This expansion involves expectant mothers moving into a communal-living arrangement with other expectant and new mothers. For several week prior to delivery to the time when the infant enters the infant program of the School (six months of age), the mothers and infant live communally. For the first month of the new infant's life, both the mother and the infant live in a private room within the complex. After that and until the infant is six months of age, he lives with other infants in the nursery. The children's areas are child-proofed and designed to provide multi-sensory stimulation. The mothers care for the children communally - nursing, diapering and bathing all the infants in this peer group. The laundry and cooking as well as general maintenance are provided for by other members of the community, the mothers have greater time to provide individual attention to their own infants and to others in the group. When the child begins to live in the infant program (age 6 to 30 months), he lives with his peers 24 hour a day and parents visit whenever they choose. There are 19 infants currently living in this peer group in the Synanon School.

During the year of the proposed study additional children will be included in this peer group since thirty women are currently pregnant and their infants will be subjects in this study.

6 Months - 30 Months

The age range within the infant program is 6 - 30 months. The physical setting of this complex is, like that described above, child-proofed and designed to stimulate the child. At all ages, the environment is designed to the child's height. Workshops for this peer group are designed with a specific purpose in mind (dramatic play, music, small muscle activity, large muscle activity). While the children are in workshops, there is minimal disturbance or interference by adults. The children are free to explore their environment with their peers. The staff-child ratio is one adult for three infants. The staff works as a team and there is constant communication within the staff in order to assure consistency in the treatment of all the children. There are 22 infants currently living in this peer group.

The School employs 90 residents of Synanon. This does not include the personnel who do cooking, serving of meals, laundry, maintenance, heavy cleaning and medical care. Twenty-six of the 90 have college degrees and ten have teaching credentials. This staff is responsible for the care of the children 24 hours a day ... health and physical safety, daily care including waking and putting to bed, bathing, education, etc. Such members of the staff are referred to as "demonstrators" rather than teachers. The School staff attends seminars, classes and conferences. A training college for teachers is currently being developed.

SUBJECTS

Table 1 contains the population analysis for children ranging in age from birth to 30 months living in the Synanon School. All of the children included in this Table will be subjects in this study.

TABLE 1

Population analysis by peer group/sex class of all children ranging in age from birth to 30 months living in the Synanon School: December 1972.

Peer Group	Sex		
	Male	Female	Total
Birth - 6 months	6	2	8
6 - 30 months	12	13	25
Total	18	15	33

Table 1 does not include the additional infants who will be born prior to and during the course of the study. The total population to be observed, including the infants of the 30 women currently pregnant, is over 60 children ranging in age from birth to 30 months.

BEHAVIOR CATEGORIES

There has been relatively little research on the social behavior of children ranging in age from birth to 2-1/2 years. Thus, there is no complete, pre-established or empirically based behavioral catalogue or ethogram. In addition, peer groups of communally-reared children have been studied only minimally and seldom, if ever, employing an ethological approach. The vast majority of research on communally-reared children has focused on measurements related to developmental analysis for purposes of comparing such children with those reared in family settings. Therefore, the proposed ethological study of peer groups of children communally reared in Synanon is much like the study of a new species.

The development of categories of behavior to record observations is critical. Several different levels may be used, ranging from description of activity in specific muscles to a broad and general behavioral analysis. The selection of the appropriate level of analysis depends both on the purpose of the study and the degree of familiarity with the species under study. According to Marler (1967), if one is attempting to assemble an ethogram, then the behavior categories should be "...large enough to apply to an extensive study in a practical manner and yet sufficiently restricted to distinguish between functionally different forms of behavior" (p. 714). Such categories are empirically determined and serve as the basis for either finer or broader analysis.

Altmann (1962) described two kinds of behavior studies in approaching a previously unstudied species. The first involved recording behavior categories which were pre-determined -- established prior to actual observation of the species. The second approach, favored by Altmann, consisted of empirical determination of behavior categories -- allowing the behavioral units to be defined by the animals. The second approach is employed in this study.

PROGRESS REPORT

The starting date on this project was January 1, 1974. The following is a report on the progress of the project from that time to March 15, 1974.

The Principal Investigator and Research Assistant have completed a total 230 hours of observation on children ranging in age from 6 to 40 months living in the Synanon School in Marshall, California. The observation schedule includes almost all waking hours of the day. The children are divided into two programs: the infant program (N = 10) consists of children from 6 to 18 months of age, while the 2 to 4 program (N = 12)

consists of children from 18 - 48 months of age. During the majority of the day, children in the two programs are not together. There are, however, periods of time when the entire group is outside in the play yard.

In addition to observations of the children, the project staff participate in meetings, seminars and feedback session with the School staff. Such interactions provide excellent opportunities for informal and formal feedback between the School and the project.

To date, the focus of the behavioral observations has been aggressive and submissive behavior in both peer groups of children studied. The following is a listing of the aggressive and submissive behaviors recorded:

AGGRESSIVE BEHAVIORS

1. Displacement
2. Chase
3. Tug
4. Pull On
5. Drag
6. Pull At
7. Pull Down
8. Pull Away
9. Grab
10. Reach For
11. Push
12. Push Off
13. Push Down
14. Take
15. Shake
16. Bite
17. Mouth
18. Open Mouth
19. Near
20. Punch
21. Slap
22. Butt
23. Tap
24. Pat
25. Beat
26. Rub
27. Raise Arm
28. Push Hit
29. Bat
30. Spank
31. Repeated Hit
32. Pike
33. Object Hit
34. Object Bat
35. Hug
36. Short Chase
37. Pull Hair
38. Kick
39. Pinch
40. Squeeze
41. Bump
42. Drop On
43. Step On
44. Walk On
45. Crawl On
46. Fall On
47. Sit On
48. Lean On
49. Jump On
50. Roll On
51. Lay On
52. Tackle
53. Scratch
54. Throw At
55. Crowding
56. Dump
57. Trip Over
58. Carry
59. Kick Down
60. Lick
61. Rush At
62. Lunge
63. Stretch Face
64. Yell/Scream
65. Vocalization

SUBMISSIVE BEHAVIORS

1. Walk Away
2. Run Away
3. Jump Away
4. Crawl Away
5. Cry
6. Short Cry
7. Scream Cry
8. Whine Cry
9. Gasp Cry
10. Long Cry
11. Pant Cry
12. Whine
13. Squeal
14. Scream
15. Whimper
16. Yelp
17. Moan
18. Grunt
19. Fall
20. Give/Release
21. Let Go
22. Drop (Object)
23. Cringe
24. Flinch
25. Blink
26. Stomp
27. Fall Prone
28. Kick Feet
29. Beat Head
30. Freeze
31. Step Back
32. Squirm Off
33. Get Off
34. Pull Back
35. Grimace
36. Avert Head
37. Screech

Records are maintained of aggressive and submissive gestures. Dyadic interactions, in which an aggressive gesture by one child was followed by a submissive gesture in the other, were recorded as "fights" and considered reliable indices of dominance relations. Dominance is reflected by the outcome of the interaction, not by the winner of an object or a piece of property. This criterion is virtually identical to that used in studies of non-human primates (Sade, 1967; Missakian, 1972A). In addition to recording the specific behaviors, notation was made of the involvement of property in the interaction. We are currently in the process of determining inter-observer reliability for the above behavior categories.

A total of over 2100 agressive-submissive interactions have been recorded since the beginning of the project. The outcome of each interaction is entered in a matrix which then provides the basic index of dominance relations between children.

Of the total number of interactions recorded among infants from 6 - 18 months of age, 93.3% revealed a linear hierarchy and 6.7% represented reversals in the hierarchy. Of the total number of interactions recorded for children from 18 - 40 months of age, the matrix was 91.6% linear. The difference between linear and non-linear interactions was statistically significant.

The dominance matrices for January and February 1974 for both the Principal Investigator and the Research Assistant were compared. One method of determining inter-observer reliability is to correlate the two independant rankings of the children. For infants 6 - 18 months of age, the correlation (Spearman Rho) between the two observers for ranks of children was +.915. The correlation for ranks of children from 18 - 40 months of age was +.986. Thus, at this general level of behavioral analysis, there was high agreement between the two observers as to the individual rank of each child.

The rank of each child was then correlated with the rank of initiation of aggressive interactions. The correlation was +.976 for the infants and -.072 for the 18 - 40 month olds. It should be pointed out that this information is based on only two months of data collection. However, the preliminary data indicate that the rank of a child ranging from 18 - 40 months of age is not significantly correlated with the aggressiveness of that child. This is not true, as shown above, for infants from 6 - 18 months of age.

In addition to recording the aggressive and submissive behaviors in such dyadic interactions, records are also maintained of (1) physical contact during and after the interaction; (2) the role of property in the interaction; (3) the location -- indoors or outdoors -- of the interaction. Each interaction, then, will have approximately ten bits of information which will be stored for later retrieval into the computer.

Medical information on all children is now being collected on a consistent basis and such records are available for use in this study. In addition, the children from 18 - 40 months of age are being tested for cognitive and social abilities. Correlations of such measures with measures of social behavior will be made when these data are available.

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